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INFORMATION REPORT

REPORT

CD NO.

25X1

COUNTRY USSR (Kuybyshev Oblast)

DATE DISTR. 12 Nov. 1952

SUBJECT Ordnance Plant no. 525 in Kuybyshev-Bezymyanka

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NO. OF ENCLS. 6 (13 pages) (LISTED BELOW)

SUPPLEMENT TO REPORT NO.

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THIS IS UNEVALUATED INFORMATION

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1. Ordnance Plant No 525 was located 1.5 km west of the Bezymyanka railroad station (53°12'N/50°15'E), just north of the railroad line to the Kuybyshev (53°12'N/50°09'E) main station. 25X1 the plant was under the supervision of an office in Moscow which was directed by Minister and Lieutenant General (Arty) Ustinov (fnu). 25X1 Another source stated that Colonel (Arty) Sharskiy (fnu) was manager of the plant until late 1947, when he was relieved by the former managing engineer of the plant. A commission, composed of naval officers, tank officers, and air force officers, was attached to the plant.

2. An ordnance factory was transferred from Tula (54°12'N/37°36'E) to this plant during the war. The production of new types of weapons started in early 1946 at the same time the quantity of weapons produced was decreased in order to produce machine tools and cream separators. *

3. During the period from 1943 to April 1949, the monthly production included about 1,200 Volga-type hand crank cream separators with capacities of 10, 20, and 30 liters. In the summer of 1948 a monthly production of 30 to 40 electrically-driven STS 01-type (sic) shaping machines, with a planing length of 700 to 900 mm, was achieved. The purchase price of each machine allegedly was 90,000 rubles. The monthly production of lead-screw lathes (Leitspindel-Drehbaenken) with a total length of 2.50 meters and a bed length of 1 meter increased from 20 lathes in 1946 to 30 lathes in late 1948. The day-shift production of the foundry was about 20 bogie wheels, about 350 mm in diameter, for tanks or tractors. Crankshafts for 4-cylinder Gorkovskiy Avto Zavod (GAZ) (Gorkiy automobile factory) engines and 6-cylinder Zavod Imeni Stalina (ZIS) (Stalin Factory) engines were ground in the grinding shop, and chain links, 300 x 500 mm, for tanks or tractors, were manufactured in the foundry. The rate of production was not known.

4. No accurate data on the production of weapons were known 25X1 Complete weapons and barrels were shipped, 25X1 the barrels were for 12.7-mm or 2 -mm aircraft cannon. The 25X1 production of the 12.7-mm DShK mounted on circular tracks as single or twin 25X1 guns was observed. One special design was fitted with a pedestal for use on warships. The day-shift production of accessories in the plant included about 4,000 links for disintegrating belts and cartridge boxes 300 x 200 x 200 mm. The production of AT rifles was also observed. These rifles were similar to the Protivo-Tankovoye Ruzhë Simonov (PTRS) (Antitank Rifle Simonov) and Protivo-Tankovoye Ruzhë

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Degtyarev(PTRD)(Antitank Rifle Degtyarev) models, and [redacted] have a caliber of 20.-mm. The magazines for the AT rifles were 200 x 30 x 180 mm. The length of the cartridge is 180 mm. The magazine boxes made in the plant held five magazines each. In 1947, eighty percent of the machine gun barrels produced were said to be faulty. This figure allegedly dropped to 50 percent after the examination by a large commission. [redacted] the percentage of waste was very high.

5. The plant worked three shifts. About 1,000 to 1,200 Russians and about 300 PWs were employed in each the first and second shifts while about 800 Russians and between 80 to 100 PWs worked in the third shift. About 2,000 workers operated lathes, milling machines, and boring machines. About 600 were specialists and 450 were unskilled workers. [redacted] the total number of employees to be between 2500 and 3000. About 40 percent of the workers were women.

6. Incoming shipments of raw material consisted of round steel, square steel, hexagonal steel, steel ingots, and sheet steel. One source stated that incoming shipments of these materials plus pig iron ingots amounted to about 50 carloads. A carload of copper sheets, brass sheets, and brass ingots arrived every week. Incoming semi-finished parts included bolt housings for heavy machine guns and AT rifles, which reportedly came from Tula, Gorkiy(56°20'N/44°00'E), and Moscow; red-brown plastic butts for T rifles; and crank shafts for motor vehicles. Castings for shaping machines came from Tula. Inscriptions written by German PWs employed in the Ural area indicated that steel and iron shipments came from that area. Information concerning the incoming shipments of raw castings for barrels was quite indefinite. [redacted] these deliveries were discontinued in 1947.

7. Civilian products and some of the weapons were shipped away by rail. [redacted] truck shipments of crates dispatched by the weapons shipping department. [redacted] the weapons were shipped to Leningrad (59°55'N/30°15'E) and Murmansk (68°58'N/33°05'E), the machine tools went to Moscow and Sverdlovsk (56°47'N/60°44'E), and the cream separators went to Central Asia and Kazak SSR.

8. [redacted] power was supplied from the Tez Rezvyanka. [redacted] power came from a power plant in Kuybyshev. Heating gas was supplied through a long distance gas line. The plant had a total of 40 to 50 motor vehicles.

9. The plant was guarded by armed civilians. No air raid precautions were observed.

[redacted] Comment. For layout sketches of the plant and of the individual sections, see Annexes 1 to 5. For sketches of the various weapons manufactured at the plant, see Annex 6. Annex one is based on [redacted] an aerial photograph taken in 1943.

[redacted] Comment. This Ordnance Plant is known from the Soviet press as the machine tool plant "Srednevolzhskiy" (Central Volga). One Sharskiy (Shu) was manager of the plant in 1946 and 1947. Press reports indicated that considerably improved lead screw lathes and screw cutting machines were produced in 1948 and 1949. The new lathes were three times as efficient as the old models. In 1948, screw cutting machines, running at 815 R.P.M., were twice as efficient as the older types and the capacity of the new machines was three times that of the old ones. [redacted] the production of weapons in 1948 and 1949 totaled 250 to 300 machine guns per month.

Attachments: 6
1. Layout sketch of ordnance plant no. 525.
2. Workshop for the production of separators and machine tools.
3. Ordnance workshop.
4. Workshop for the production of tools.
5. Forge and foundry.
6. Sketches of weapons.

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Attachment 1

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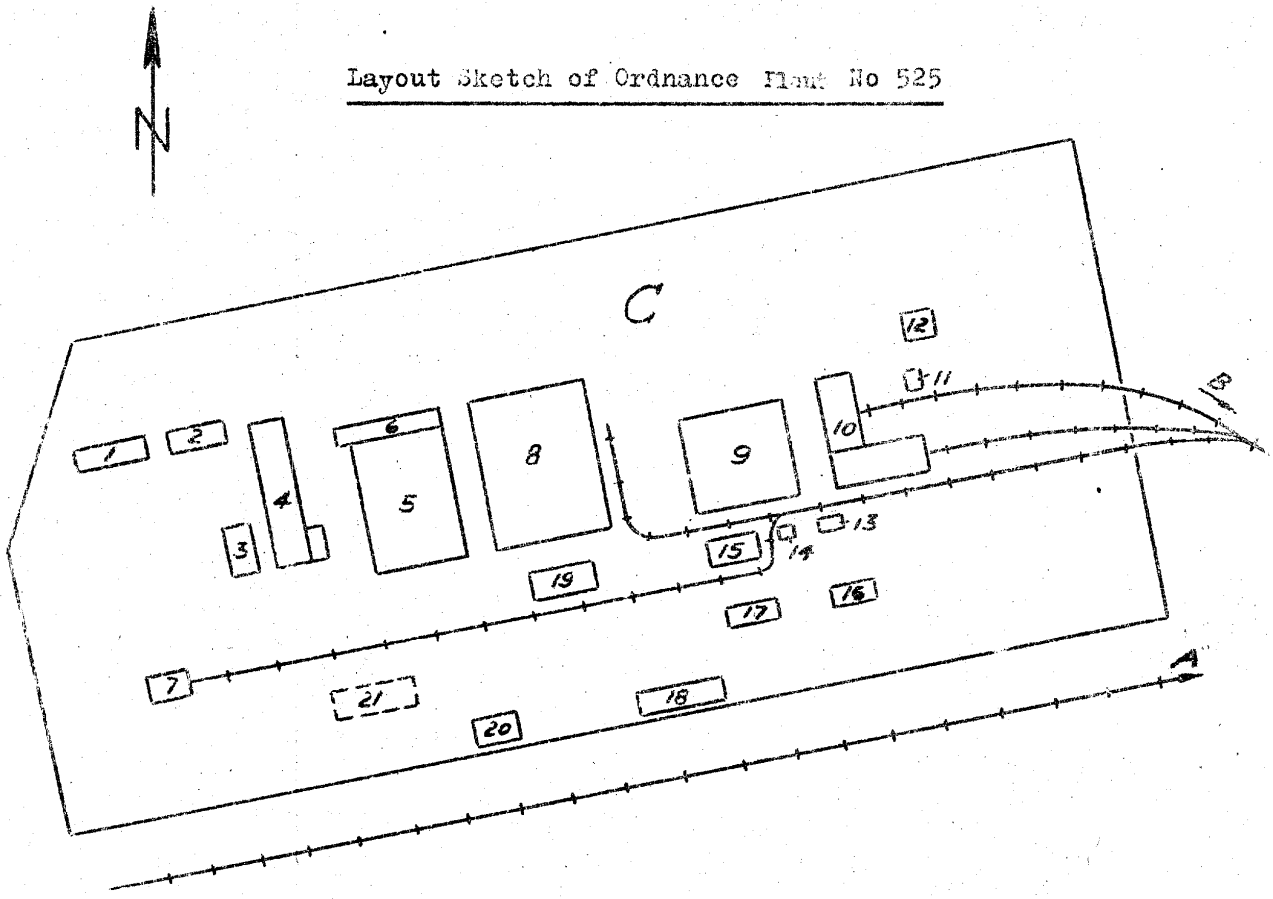
Layout Sketch of Ordnance Plant No 525



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Attachment 1

Legend:

A. Railroad from Kuybyshev to Bezymyanka.

B. Spur track to the Bezymyanka railroad station.

C. Ordnance Plant No 525.

1. Warehouse for acid.
2. Ammunition warehouse.
3. Wooden hut housing various workshops.
4. Underground testing range and shipping department.
5. Korpus I. Cream separators and shaping machines were produced here.
6. Central administration building, 4 stories.
7. Oxygen installation.
8. Korpus II. Ordnance factory.
9. Korpus III. Machine tool factory shop for the construction of jigs and fixtures, and hardening shop for weapons.
10. Forge and foundry.
11. Warehouse for materials.
12. Fire brigade and garage.
13. Pattern-making workshop.
14. Transformer
15. Heating plant.
16 and 17. Saw mill, carpentery shop and lumber warehouse
18. Warehouse.
19. Welding shop and gas generation plant where bipods and trigger mechanisms for antitank rifles and other small parts are made.

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Attachment 2

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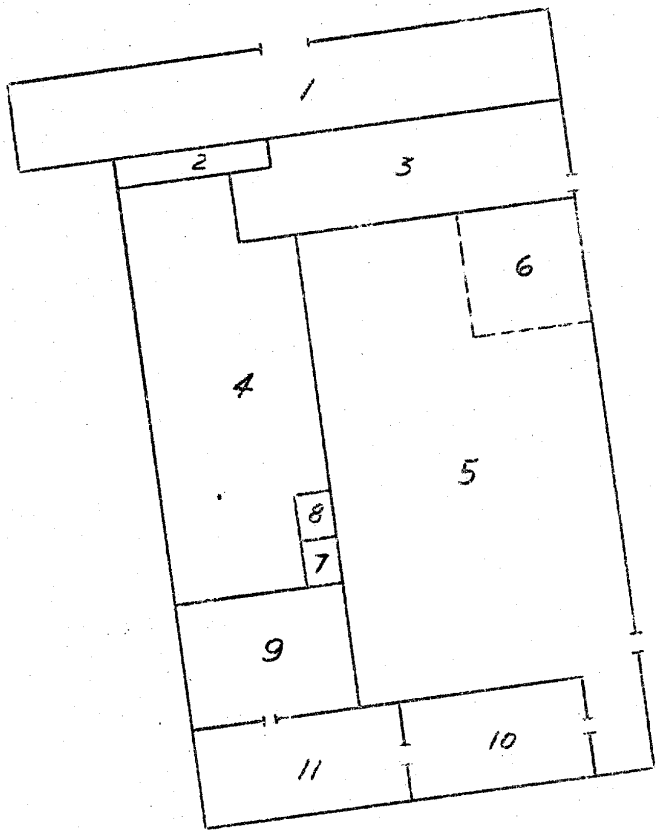
Workshop for the PRODUCTION of Separators and Machine Tools



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Attachment 2

1. Main administration building, four stories.

2. Sanitary installations.

3. Tsekh (shop) 22: Repair section of the plant, equipped with machine tools, work benches, etc.

4. Production and assembly of separators. The equipment consisted of about 60 to 70 machine tools arranged in four rows, including 10 turret lathes, 5 medium-sized lathes, 12 small lathes, 20 small and medium-sized milling machines, and a number of assembly benches.

5. Tsekh 20: for the production of shaping machines and lead-screw lathes, equipped with a total of about 100 machine tools, including:

1 large single-spindle boring machine of Kolb make

1 large single-spindle boring machine of Raboma make

1 medium-sized single-spindle boring machine of Raboma make

1 parallel planing machine, plane length about 3 meters, width about 1 meter, of German make.

2 parallel planing machines, plane length about 4 meters, width 1.5 meters, of Boeringer make.

1 parallel planing machine, plane length 5 meters, width 1 meter, of Skoda make.

1 horizontal boring machine of German make.

1 small horizontal milling machine of Russian make.

1 small vertical milling machine of German make.

1 medium-sized horizontal boring machine of Russian make.

1 lathe, center distance about 5 meters, height of centers about 1 meter, of Raboma make.

1 large horizontal boring machine of German make.

1 lathe, center distance about 3 meters, height of centers about 600 mm, of VDF make.

1 small horizontal boring machine of American Karns make.1

Work benches with vises, and assembly pits for mounting the shaping machines.

1 lathe, center distance about 2.5 meters, of Russian make.

1 lathe, center distance about 1.5 meters, of Russian make.

3 lathes, center distance 1.20 meters, height of centers about 400 mm, of Russian make, Type 200.

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10 small lathes, center distance about 1 meter, height of centers about 150 mm, of Russian make.

1 lathe, center distance about 2.5 meters, height of centers about 600 mm, of Gustloff make.

1 bevel gear milling machine of Russian make.

1 bevel gear milling machine of German make.

2 small horizontal milling machines of Russian make.

2 small vertical milling machines of Russian make.

1 circular grinding machine of Russian make.

1 surface grinding machine of Russian make.

2 lathes, 120 x 40 centimeters, of Russian make.

2 small lathes, about 100 x 15 centimeters, of Russian make.

6. Assembly room for machine tools.

7. Spraying shop for cream separators.

8. Crankshaft grinding shop with 8 grinding machines.

9. Shop for chrome plating cream separators, equipped with 6 electric units.

10. Tempering shop for weapons and for components of shaping machines and separators, equipped with 4 electric hardening furnaces and 5 quenching baths.

11. Polishing shop for component parts for cream separators.

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Ordnance Workshop

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Attachment 3

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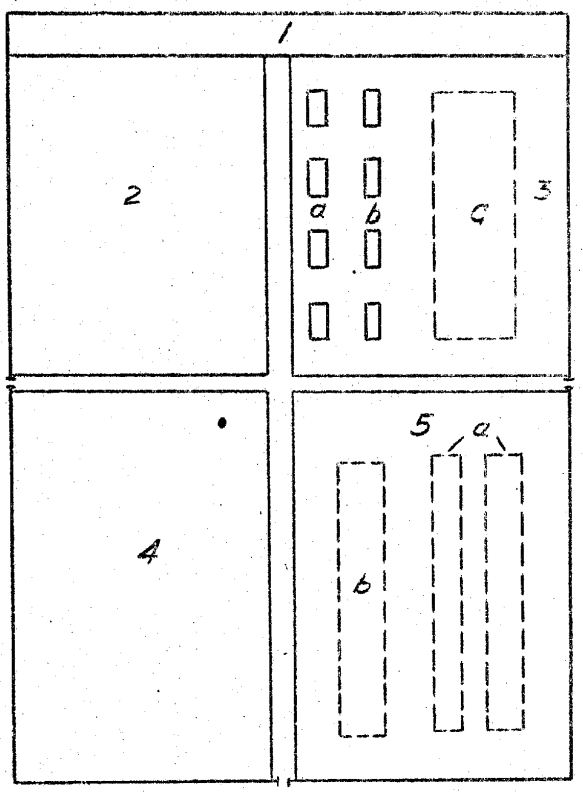

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Attachment 3

Legend:

1. Plant kitchen.

2. Lathe shop for weapon parts, equipped with 60 to 80 machine tools, most of which were lathes.

3. Tsekh 31, punching shop and pressing shop for weapon parts, equipped with:

   a. 3 or 4 heavy-duty eccentric punching machines.

   b. 4 or 5 small eccentric punching machines.

   c. 15 small punching machines, 4 or 5 circular saws for metal working, 1 automatic punching machine for machine gun ammunition belt links, 6 lathes, 6 turning--and-boring mills, several boring machines and grinding machines.

4. Ordnance assembly shop with adjusting plant where heavy MG DShK and antitank rifles were seen.

5. Lathe shop and slotting shop for barrels.

   a. Two rows, with a total of about 16 four-spindle horizontal boring machines used for the production of barrels.

   b. Five or 6 lathes used for outside machining of the barrels and 2 or 3 slotting machines for the simultaneous machining of 10 barrels.

About 300 workers were employed in this shop.

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Workshop for the Production of Tools

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Attachment 4

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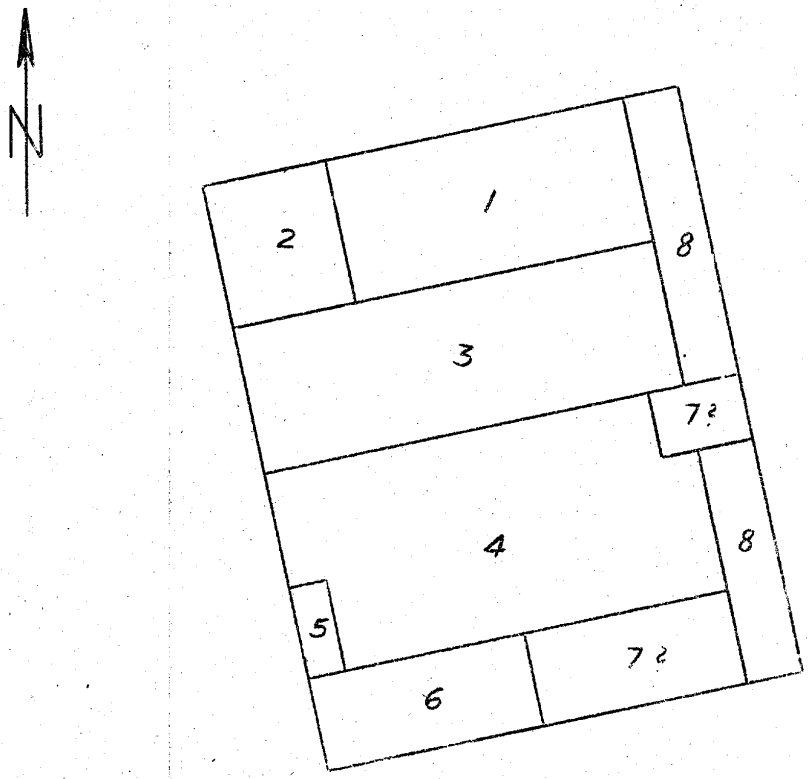

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Legend:

1. Tsekh 10, where gauges were produced and measuring instruments were repaired.
2. Test laboratory for gauges and optical measuring instruments.
3. Tsekh 11, where jigs and fixtures for the production of weapons were constructed, equipped with about 21 different machine tools.
4. Mechanical section, equipped with about 100 machine tools, used for the production of cutting tools for plant requirements.
5. Tool shed.
6. Welding shop equipped with 5 electric and 3 acetylene welding machines. The pedestals for twin machine guns were welded here.
7. Hardening shop for gauges and cutting tools and also for gun barrels, equipped with 5 or 6 electric annealing furnaces, 2 gas-fired furnaces and several annealing baths.
8. Offices and test laboratories.

Between 600 to 700 workers were employed in this shop.

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Forge and Foundry

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Attachment 5

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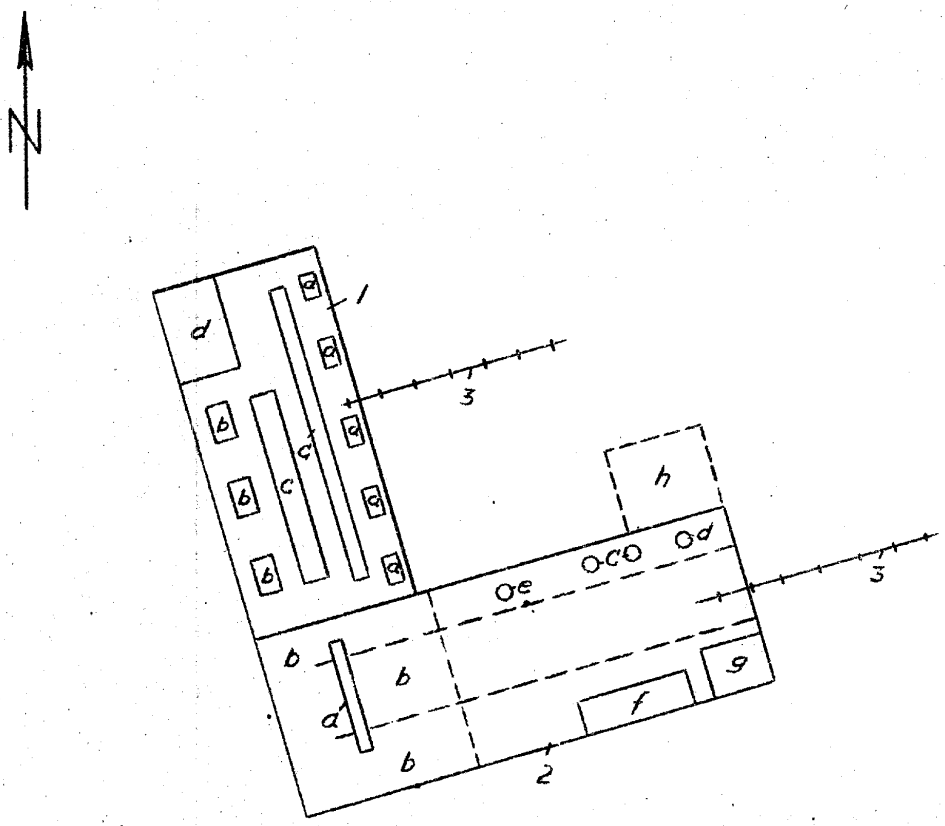

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Legend:

1. Forge, equipped with

   a. 4 or 5 American steam hammers.

   b. 2 or 3 heavy-duty USA hammers.

   c. Natural gas fired annealing furnaces, one for each hammer.

   d. Die-making section. There were also several presses for the manufacture of machine gun barrels, boring machines and lathes, and an oil-bath hardening installation with gas-fired furnaces.

   Barrels for the12.7-mm machine guns were forged in four different dies after being preheated. The time required for each barrel was about 2 minutes. The barrels for antitank rifles required longer processing. They were subjected to 3 annealing operations and then to 5 or 6 blows under the steam hammer in different dies.

2. Foundry and molding Shop:

   a. Traveling crane.

   b. Molding shop with 2 or 3 molding machines.

   c. 2 electric steel furnaces with a capacity of 1 to 1.5 tons.

   d. 1 or 2 cupolas.

   e. Electric smelting furnace for nonferrous metals.

   f. 3 mixers for molding sand.

   g. Casting cleaning shop.

   h. Unfinished brick building which had no roof. No construction work was noticed although the Russians said the foundry was to be expanded.

In addition to producing castings, the foundry also produced and shipped 10 gear boxes for T-34 tanks during the day-shift and 20 smaller gear boxes, probably for tractors. A Russian expert also manufactured two ship screws per day from time to time.

3. Railroad tracks.

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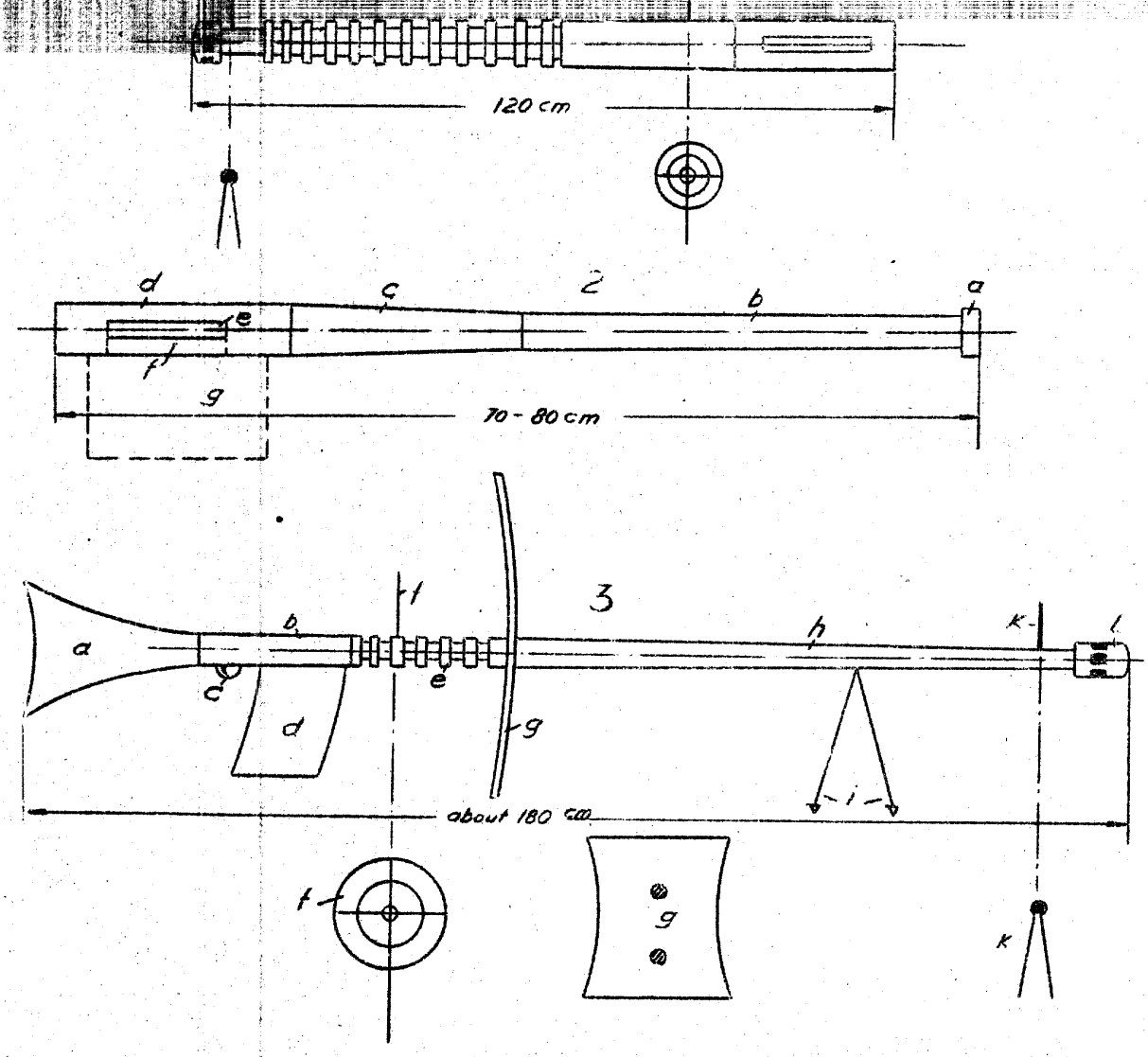
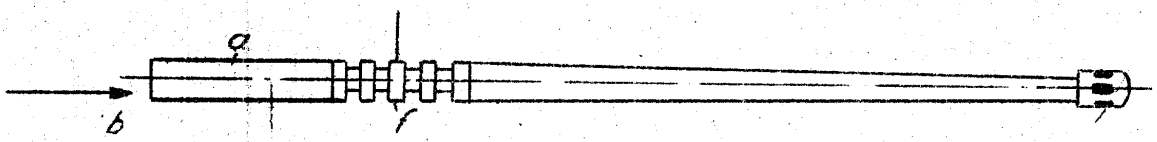
Attachment 6





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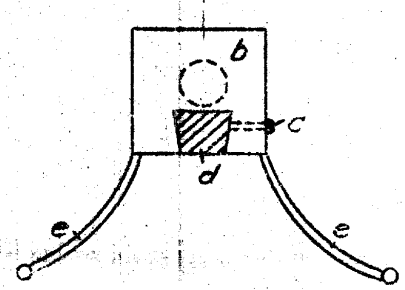

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Legend:

1. Barrel, probably for a heavy DShK machine gun.

2. Barrel, allegedly of a 12.7-mm or 20-mm aircraft cannon:

   a. Compensator.

   b. Smooth cylindrical part of barrel.

   c. Conical part of barrel.

   d. Lock mechanism.

   e. Opening for side belt feed.

   f. Cartridge case ejector.

   g. Fabric bag for empty cartridge cases about the size of a brief case.

3. Sketch of an AT rifle:

   a. Red-brown plastic butt.

   b. Closing mechanism with lock.

   c. Trigger.

   d. Cartridge magazine, 200 x 30 x 130 mm.

   e. About 7 circular grooves, approximately 7-mm wide.

   f. Ring sight. Side and front views.

   g. Protective shield, 5 to 6 mm thick, about 700 mm high, and about 600 mm wide. Side and front views.

   h. Smooth, conical part of barrel.

   i. Hinged bipod.

   k. Sighting device, a small round disk with a tiny round hole. Side and front views.

   l. Cast iron cylindrical muzzle brake with 4 rectangular perforations.

4. A weapon similar to the AT rifle. Side and rear views:

   a. Closing mechanism with lock.

   b. Bolt mechanism.

   c. Side press-button, which operates a spring closure fitted in recess d.

   d. Milled recess.

   e. Brackets attached to each side, with small ring welded on the end.

   f. About 7 circular grooves, 7 mm wide.

   The weapons shown in sketches 3 and 4 are of about 20-mm caliber and have identical barrels and sighting devices.